



DEPARTMENT OF TRANSPORTATION  
HAZARDOUS MATERIALS REGULATIONS BOARD  
WASHINGTON, D.C. 20590

10784

[Docket No. HM-65; Amdt. 177-16]

**PART 177—SHIPMENTS MADE BY  
WAY OF COMMON, CONTRACT,  
OR PRIVATE CARRIERS BY PUBLIC  
HIGHWAY**

**Bonding and Grounding Flammable  
Liquid Cargo Tanks**

The purpose of this amendment to the Department's Hazardous Materials Regulations is to provide specific requirements for bonding and grounding cargo tanks before and during transfer of lading. Also, the requirements for transfer of flammable liquids while the motor vehicle engine is running are clarified.

On December 2, 1970, the Hazardous Materials Regulations Board published a notice of proposed rule making, Docket No. HM-65; Notice No. 70-21 (35 F.R. 18323) which proposed this amendment. Interested persons were invited to give their views and several comments were received by the Board. On April 20, 1971, at the invitation of the Secretary of the Board, a meeting was held between the commenters and the Department to give all interested persons the opportunity to clarify their comments to this Docket.

Several commenters noted that proposed § 177.837(c)(2) overlooked the possibility that a dangerous condition could be created by an open vent close to a vapor-tight connection, as the Department's regulations do not specify the relative location of vents to connections. Other commenters suggested that this subparagraph should cover unloading. Several commenters objected to proposed § 177.837(c)(3), noting that its purpose from a safety standpoint was not apparent. They stated that application of the proposed rule would result in serious difficulties in tank truck operations. Several suggestions were made to revise the wording. The Board finds that these comments have merit and has incorporated appropriate changes in this amendment.

Accordingly, 49 CFR Part 177 is amended as follows:

In § 177.837, paragraph (a) and the first sentence of paragraph (b) are amended; a new paragraph (c) is added to read as follows:

**§ 177.837 Flammable liquids.**

(See also § 177.834 (a) to (k).)

(a) *Engine stopped.* Unless the engine of the motor vehicle is to be used for the operation of a pump, no flammable liquid shall be loaded into, or on, or unloaded from any motor vehicle while the engine is running.

(b) *Bonding and grounding containers other than cargo tanks prior to and during transfer of lading.* \* \* \*

(c) *Bonding and grounding cargo tanks before and during transfer of lading.* (1) When a cargo tank is loaded through an open filling hole, one end of a bond wire shall be connected to the stationary system piping or integrally connected steel framing, and the other end to the shell of the cargo tank to provide a continuous electrical connection. (If bonding is to the framing, it is essential that piping and framing be electrically interconnected.) This connection must be made before any filling hole is opened, and must remain in place until after the last filling hole has been closed. Additional bond wires are not needed around All-Metal flexible or swivel joints, but are required for nonmetallic flexible connections in the stationary system piping. When a cargo tank is unloaded by a suction-piping system through an open filling hole of the cargo tank, electrical continuity shall be maintained from cargo tank to receiving tank.

(2) When a cargo tank is loaded or unloaded through a vapor-tight (not open hole) top or bottom connection, so that there is no release of vapor at a point where a spark could occur, bonding or grounding, is not required. Contact of the closed connection must be made before flow starts and must not be broken until after the flow is completed.

(3) Bonding or grounding is not required when a cargo tank is unloaded through a nonvapor-tight connection into a stationary tank provided the metallic filling connection is maintained in contact with the filling hole.

\* \* \* \* \*

This amendment is effective August 31, 1971; however, compliance with the regulations as amended herein is authorized immediately.

(Secs. 831-835, Title 18, United States Code; sec. 9, Department of Transportation Act (49 U.S.C. 1657))

Issued in Washington, D.C., on May 27, 1971.

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